A paper was also read, entitled, " On the Law which connects the various Magneto-electric Phenomena lately discovered by Dr. Faraday." By the Rev. William Ritchie, LL.D. F.R.S. Professor of Natural and Experimental Philosophy in the Royal Institution of Great Britain, and Professor of Natural Philosophy and Astronomy in the University of London.

The general principle from which the author deduces the law in question, is that of the equality of action and reaction. The application of this principle to electro-magnetism, he thinks, may be thus expressed :—since a current of voltaic electricity can, in certain circumstances, induce magnetism, magnets will, in similar circumstances, induce similar voltaic currents. He gives an account of several experiments in confirmation of the universality of this law.

A paper was then read, entitled, " An Account of an extraordinary Meteor seen at Malvern, November 12, 1832." By W. Addison, Esq. F.L.S. Communicated by W. G. Maton, M.D. V.P.R.S.

The author beheld, from the Malvern Hills, a constant succession of meteors, of various degrees of magnitude and brilliancy. The smaller ones were like those commonly called shooting stars, and left behind them, for a moment, a train of pale yellowish light. Others were much more brilliant ; and notwithstanding the bright moonshine threw a strong glare upon every object, they always commenced as a small luminous point, rapidly increasing in size and splendour, shooting with great swiftness over a considerable arc, and then, suddenly disappearing, left behind them a long train of very vivid white light, which slowly changed into a pale yellow. The author witnessed this scene for upwards of an hour, although it was still going on when he left it. At one time he counted forty-eight of these meteors during the interval of five minutes.

December 20, 1832.

FRANCIS BAILY, Esq., Vice-President, in the Chair.

A paper was read, entitled, " On certain properties of Vapour." By the Rev. Dionysius Lardner, LL.D. F.R.S.

It has been generally supposed, that if a certain volume of aqueous vapour, contained in a vessel that was incapable of transmitting heat, were compressed by an exterior force into a space sufficiently small, a part of it would be restored to the liquid state. The author considers this assumption to be at variance with the doctrine of latent heat, and inconsistent with the results deduced from the experiments which have established that the absolute quantities of heat necessary to convert a given weight of water into steam, under all pressures, are sensibly equal. It follows, from this principle, that steam raised from water, under any pressure whatever, admits of indefinite compression and expansion, without returning to the liquid state. The effect of its compression will be to evolve heat and raise the temperature ; that of its expansion, to absorb heat and lower the temperature : but in every state of density it will have exactly that tempera-